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PTO/SB/21 (08-03)

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

		Application Number	10/655,999
		Filing Date	09/05/03
		First Named Inventor	Eric A. Schon
		Art Unit	1646
		Examiner Name	to be assigned
Total Number of Pages in This Submission	17	Attorney Docket Number	5199-23

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance communication to Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Return receipt postcard
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Todd Holmbo, Reg. No. 42,665
Signature	
Date	6/7/04

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Eric A. Schon Docket No.: 5199-23
Serial No.: 10/655, 999 Examiner: to be assigned
Filed: September 5, 2003 Group Art Unit: 1646
Title: **METHODS FOR XENOTOPIC EXPRESSION OF NUCLEUS-ENCODED PLANT AND PROTIST PEPTIDES AND USES THEREOF**

June 7, 2004

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.97(b)

Sir:

In accordance with the duty of disclosure under 37 CFR §1.56, applicant hereby notifies the U. S. Patent and Trademark Office of the following documents, which are listed on the attached PTO/SB/08B form. The examiner may deem these documents to be relevant to patentability of the claims of the above-identified application. Copies of the documents are enclosed for the examiner's convenience.

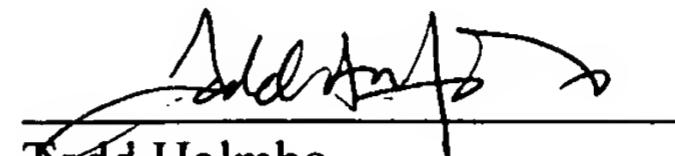
The submission of the listed documents is not intended as an admission that any of the documents constitute prior art against the claims of the present application. Applicants do not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

Applicants respectfully request that the listed documents be considered by the examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08B be returned in accordance with MPEP §609.

It is understood that no fee is necessary for submission of this Information Disclosure Statement, as it is being filed before the later of three months from the filing date or the mailing of the first Office Action on the merits.

The Commissioner is hereby authorized to charge payment of any fees associated with this application or credit any overpayment to Deposit Account No. 02-4270.

Respectfully submitted,



Todd Holmbo
Reg. No. 42,665
Attorney for Applicants
BROWN RAYSMAN MILLSTEIN
FELDER & STEINER LLP
163 Madison Avenue
P.O. Box 1989
Morristown, New Jersey 07962-1989
(973) 775-8930

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

1

of

14

Complete if Known

Application Number	10/655,999
Filing Date	09/05/03
First Named Inventor	Eric Schon
Art Unit	1315
Examiner Name	to be assigned

Attorney Docket Number

5199-23

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Adams et al., Plant Cell, 14:931-943, 2002 <i>(N/A)</i>	
		Anderson et al., Sequence and organization of the human mitochondrial genome.	
		Nature, 290:457-465, 1981	
		Asamizu et al., DNA Res., 6:369-73, 1999 <i>(N/A)</i>	
		Asamizu et al., DNA Res., 7:305-07, 2000 <i>(N/A)</i>	
		Bai, et al., Lack of Complex I Activity in Human Cells Carrying a Mutation in MtDNA-encoded ND4 Subunit Is Corrected by the Saccharomyces cerevisiae NADH-Quinone Oxidoreductase (ND1) Gene.	
		J. Biol. Chem., 276:38808-38813. 2001	

Examiner Signature	Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:
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Substitute for form 1449/PTO		Complete if Known			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Application Number	10/655,999		
		Filing Date	09/05/03		
		First Named Inventor	Eric Schon		
		Art Unit	1315		
		Examiner Name	to be assigned		
Sheet	2	of	14	Attorney Docket Number	5199-23

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
		Boer and Gray, Transfer RNA genes and the genetic code in Chlamydomonas reinhardtii mitochondria.		
		Curr. Genet., 14:583-590, 1988		
		Breen et al., Mitochondrial DNA of Two Independent Oligomycin-resistant Chinese Hamster Ovary Cell Lines Contains a Single Nucleotide Change in		
		the ATPase 6 Gene.		
		J. Biol. Chem., 261:11680-11685, 1986		
		Claros et al., Limitations to in vivo import of hydrophobic proteins into yeast mitochondria, The case of a cytoplasmically synthesized		
		apocytochrome b.		
		Eur. J. Biochem., 228:762-771, 1995		
		Claros et al., Allotopic Expression of Yeast Mitochondrial Maturase to Study Mitochondrial Import of Hydrophobic Proteins.		
		Meth. Enzymol., 264:389-403, 1996		

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		First Named Inventor	Eric Schon
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		Examiner Name	to be assigned
Sheet	3	of	14
		Attorney Docket Number	5199-23

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		Covello et al., Silent Mitochondrial and Active Nuclear Gene for Subunit 2 of Cytochrome c Oxidase (cox2) in Soybean: Evidence for RNA-Mediated	
		Gene Transfer.	
		EMBO J., 11:3815-3820, 1992	
		Daley et al., Intracellular Gene Transfer: Reduced Hydrophobicity Facilitates Gene Transfer for Subunit 2 of Cytochrome c Oxidase	
		Proc. Natl. Acad. Sci. USA, 99:10510-10515, 2002	
		Daley et al., Gene Transfer From Mitochondrion to Nucleus: Novel Mechanisms for Gene Activation From Cox2.	
		Plant J., 30:11-21, 2002.	
		Denovan-Wright et al., Complete Sequence of the Mitochondrial DNA of Chlamydomonas eugametos.	
		Plant Mol. Biol., 36:285-295, 1998	

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Sheet	4	of	14	Attorney Docket Number	5199-23

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		de Grey, Mitochondrial gene therapy: an arena for the biomedical use of inteins.	
		Trends Biotechnol., 18:394-99, 2000	
		Elston et al., Energy transduction in ATP synthase.	
		Nature, 391:510-513, 1998	
		Funes et al., The typically mitochondrial DNA-encoded ATP6 subunit of the F1F0-ATPase is encoded by a nuclear gene in Chlamydomonas	
		reinhardtii.	
		J. Biol. Chem., 277:6051-6058, 2002	
		Garcia et al., Protein Phosphatase 2A and Phosphatidylinositol 3-Kinase Regulate the Activity of Sp1-responsive Promoters.	
		J. Biol. Chem., 275:9385-9389, 2000	

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		Gray and Boer, Organization and expression of algal (<i>Chlamydomonas reinhardtii</i>) mitochondrial DNA			
		Philos. Trans. R. Soc. Lond. Biol. Sci., 319:135-147, 1988			
		Gray et al., Allotopic Expression of Mitochondrial ATP Synthase Genes in Nucleus of <i>Saccharomyces cerevisiae</i> .			
		Meth. Enzymol., 264:369-389, 1996			
		Gray et al., The origin and early evolution of mitochondria.			
		Genome Biol., 2:1018.1-1018.5, 2001			
		Herlitze and Koenen, A general and rapid mutagenesis method using polymerase chain reaction.			
		Gene, 91:143-147, 1990			
		Holt et al., A new mitochondrial disease associated with mitochondrial DNA Heteroplasmy.			
		Am. J. Hum. Genet., 46:428-433, 1990			

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		Hutcheon et al., Energy-driven subunit rotation at the interface between subunit a and the c oligomer in the Fo sector of Escherichia coli ATP synthase.	
		Proc. Natl. Acad. Sci. USA, 98:8519-8524, 2001	
		James et al., Decreased ATP synthesis is phenotypically expressed during increased energy demand in fibroblasts containing mitochondrial tRNA mutations, Implications for neurodegenerative and mitochondrial DNA diseases	
		Eur. J. Biochem., 259:462-469, 1999	
		John and Nagley, Amino acid substitutions in mitochondrial ATPase subunit 6 of <i>Saccharomyces cerevisiae</i> leading to oligomycin resistance.	
		FEBS Lett., 207:79-83, 1986	
		Kroymann and Zetsche, The mitochondrial genome of <i>Chlorogonium elongatum</i> inferred from the complete sequence.	
		J. Mol. Evol., 47:431-440, 1998	

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		Kubo, et al., Transfer of the mitochondrial rps10 gene to the nucleus in rice: acquisition of the 5' untranslated region followed by gene duplication.			
		Mol. Gen. Genet., 263:733-739, 2000			
		Lang et al., Mitochondrial genome evolution and the origin of eukaryotes.			
		Annu. Rev. Genet., 33:351-397, 1999			
		Law et al., Studies on the import into mitochondria of yeast ATP synthase subunits 8 and 9 encoded by artificial nuclear genes.			
		FEBS Lett., 236:501-505, 1988			
		Manfredi et al., Oligomycin induces a decrease in the cellular content of a pathogenic mutation in the human mitochondrial ATPase 6 gene.			
		J. Biol. Chem., 274:9386-9391, 1999			
		Manfredi et al., Assay of mitochondrial ATP synthesis in animal cells.			
		Methods in Cell Biol., 65:133-145, 2001			

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		Manfredi et al., Rescue of a deficiency in ATP synthesis by transfer of MTATP6, a mitochondrial DNA-encoded gene, to the nucleus		
		Nature Genet., 25:394-399, 2002		
		Mariottini et al., Identification of the polypeptides encoded in the unassigned reading frames 2, 4, 4L, and 5 of human mitochondrial DNA		
		Proc. Natl. Acad. Sci. USA, 83:1563-1567, 1986		
		Nagley et al., Assembly of functional proton-translocating ATPase complex in yeast mitochondria with cytoplasmically synthesized subunit 8, a polypeptide normally encoded within the organelle.		
		Proc. Natl. Acad. Sci. USA, 85:2091-2095, 1988		
		Nass and Nass, Intramitochondrial fibers with DNA characteristics.		
		J. Cell Biol., 19:593-629, 1963		

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				Filing Date	09/05/03
				First Named Inventor	Eric Schon
				Art Unit	1315
				Examiner Name	to be assigned
Sheet	9	of	14	Attorney Docket Number	5199-23

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ²
		Noji, et al., The rotary machine in the cell, ATP synthase.			
		J. Biol. Chem., 276:1665-1668, 2001			
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		Perez-Martinez et al., Unusual Location of a Mitochondrial Gene.	
		J. Biol. Chem., 275:30144-30152, 2000	
		Perez-Martinez et al., Subunit II of Cytochrome c Oxidase in Chlamydomonad Algae Is a Heterodimer Encoded by Two Independent Nuclear Genes.	
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		Ann. Neurol., 48:774-781, 2000	

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		Rastogi and Girvin, Structural changes linked to proton translocation by subunit c of the ATP synthase.			
		Nature, 402:263-268, 1999			
		Sambrook et al., Molecular Cloning: A Laboratory Manual (2d ed.) vols. 1-3 (Cold Spring Harbor Laboratory Press, 1989)			
		Schagger et al., Coomassie Blue-Sodium Dodecyl Sulfate-Polyacrylamide Gel Electrophoresis for Direct Visualization of			
		Polypeptides during Electrophoresis.			
		Anal. Biochem., 173:201-205, 1988			
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		Schon et al., Pathogenesis of primary defects in mitochondrial ATP synthesis.			
		Semin. Cell Dev. Biol., 12:441-448, 2001			

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		Seo et al., Molecular remedy of complex I defects: Rotenone-insensitive internal NADH-quinone oxidoreductase of <i>Saccharomyces cerevisiae</i>		T ²
		mitochondria restores the NADH oxidase activity of complex I - deficient mammalian cells.		
		Proc. Natl. Acad. Sci. USA, 95:9167-9171, 1998		
		Snell, Mating in <i>Chlamydomonas</i> : A system for the study of specific cell adhesion.		
		J. Cell Biol., 68:48-69, 1976		
		Sutherland et al., Multisite oligonucleotide-mediated mutagenesis:application to the conversion of a mitochondrial gene to universal genetic code.		
		Biotechniques, 18:458-464, 1995, Harbor, NY: Cold Spring Harbor Laboratory, 1989		
		Schuelke et al., Mutant NDUFV1 subunit of mitochondrial complex I causes leukodystrophy and myoclonic epilepsy.		
		Nature Genet., 21:260-261, 1999		

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		Tan et al., tRNAs in Trypanosoma brucei: Genomic Organization, Expression, and Mitochondrial Import.	
		Mol. Cell Biol., 22:3707-3717, 2002	
		Tatuch et al., Heteroplasmic mtDNA Mutation (T-G) at 8993 Can Cause Leigh Disease When the Percentage of Abnormal mtDNA Is High.	
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		Tatuch and Robinson, The Mitochondrial DNA Mutation at 8993 Associated with NARP Slows the Rate of ATP Synthesis in Isolated	
		Lymphoblast Mitochondria.	
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		J. Inher. Metab. Dis., 19:43-50, 1996	

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		Watanabe and Obama, Regular Spliceosomal Introns are Invasive in Chlamydomonas reinhardtii: 15 Introns in the Recently Relocated			
		Mitochondrial cox2 and cox3 Genes.			
		J. Mol. Evol., 53:333-339, 2001			
		Wegener and Beck, Plant Mol. Biol., 16:937-946, 1991 (N/A)			
		Zullo, S. J., Gene Therapy of Mitochondrial DNA Mutations: A Brief, Biased History of Allotopic Expression in Mammalian Cells.			
		Semin. Neurol., 21:327-335, 2001			

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